

REMARKS

The Applicants respectfully request reconsideration of this application in view of the above amendments and the following remarks.

Drawings

The drawings have been objected to as allegedly failing to comply with 37 CFR 1.84(p)(5). In particular, the Examiner has asserted that reference number 330 shown in Figure 3 is not mentioned in the description.

Applicants respectfully submit that the specification has been amended to overcome the objection. In particular, the paragraph beginning at line 30 on page 6 has been amended to include the reference number 330. Accordingly, Applicants respectfully request that the objection to the drawings be withdrawn.

Specification

The Examiner has objected to the specification.

Applicants respectfully submit that the specification has been amended to overcome the objection. Applicants respectfully request that the Examiner withdraw the objection to the specification.

Claim Objections

Claims 12-14 have been objected to because they depend on a claim of a different statutory class.

Applicants respectfully submit that claims 12-14 have been amended to overcome the objection. Accordingly, Applicants respectfully request that the objection to claims 12-14 be withdrawn.

35 U.S.C. §103(a) Rejection – Chang, Lee

Claims 1, 3, 5-8 and 10 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,289,470 issued to Chang et al. (hereinafter “Chang”) in view of U.S. Publication No. 2006/0227799 A1 to Lee (hereinafter “Lee”). Without admitting that these references could or should be combined, the Applicants respectfully submit that the present claims are allowable over Chang and Lee.

Claim 1 recites:

“A method comprising:

pre-registering each of a plurality of remote direct memory access (RDMA) buffers to a different connection of a plurality of connections;

determining that a pre-registered RDMA buffer of the plurality, which has been pre-registered for a given connection, has insufficient size to transfer data;

provisioning and registering a larger RDMA buffer for the given connection, wherein a larger RDMA buffer is not provisioning and registered for another connection of the plurality, wherein a size of the larger RDMA buffer is larger than a size of the pre-registered RDMA buffer; and

transferring the data to a network using the larger RDMA buffer”.

Chang and Lee do not disclose these limitations or render them obvious. In particular, Chang and Lee do not disclose or render obvious “*pre-registering each of a plurality of remote direct memory access (RDMA) buffers to a different connection of a plurality of connections*” and “*provisioning and registering a larger RDMA buffer for the given connection, wherein a larger RDMA buffer is not provisioning and registered for another connection of the plurality*”, in combination with the other claim limitations.

Chang discusses in part a flexible scheme for buffer space allocation in network devices. However, as understood by Applicants, Chang does not disclose or render obvious *"pre-registering each of a plurality of remote direct memory access (RDMA) buffers to a different connection of a plurality of connections"*. Moreover, as understood by Applicants, Chang does not disclose or render obvious *"provisioning and registering a larger RDMA buffer for the given connection, wherein a larger RDMA buffer is not provisioning and registered for another connection of the plurality"*.

Lee discusses in part dynamically allocating memory for RDMA data transfers. However, as understood by Applicants, Lee does not disclose or render obvious *"provisioning and registering a larger RDMA buffer for the given connection, wherein a larger RDMA buffer is not provisioning and registered for another connection of the plurality"*. Rather, as understood by Applicants, Lee discusses dynamically changing the size of a memory pool by dynamically allocating and de-allocating buffers. However, allocating and de-allocating buffers is different than *"provisioning and registering a larger RDMA buffer for the given connection, wherein a larger RDMA buffer is not provisioning and registered for another connection of the plurality"*.

For at least one or more of these reasons, claim 1 and its dependent claims are believed to be allowable over Chang and Lee.

Independent claim 8, its dependent claims, are believed to be allowable over Chang and Lee for one or more similar reasons.

35 U.S.C. §103(a) Rejection – Chang, Lee and Kato

Claims 2, 9 and 15-19 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Chang in view of Lee and in further view of U.S. Patent No. 4,805,168 issued to Kato (hereinafter "Kato"). Without admitting that these references could or should be combined, the Applicants respectfully submit that the present claims are allowable over Chang, Lee and Kato.

Claim 15 recites:

"A method comprising:

receiving a control message indicating to selectively provision an remote direct memory access (RDMA) buffer having a size larger than a pre-registered RDMA buffer for a given connection rather than for all connections;

provisioning the RDMA buffer;

receiving data into the provisioned RDMA buffer".

Chang, Lee and Kato do not disclose these limitations or render them obvious. In particular, Chang, Lee and Kato do not disclose or render obvious *"receiving a control message indicating to selectively provision an remote direct memory access (RDMA) buffer having a size larger than a pre-registered RDMA buffer for a given connection rather than for all connections"*, in combination with the other claim limitations.

Chang and Lee do not disclose these limitations, or render them obvious. The discussion above is pertinent to this point.

As understood by Applicants, Kato does not remedy all of what is missing from these references. Moreover, the Examiner does not appear to have relied upon Kato as disclosing all of these limitations, or articulated where all of these missing limitations are found in Kato.

Accordingly, Applicants respectfully submit that independent claim 15, and its dependent claims, are believed to be allowable over Chang, Lee and Kato.

Independent claims 1 and 8, and their respective dependent claims (including claims 2 and 9), are believed to be allowable for one or more similar reasons.

35 U.S.C. §103(a) Rejection – Chang, Lee and Official Notice

Claims 11 and 13-14 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Chang in view of Lee and in further view of Official Notice (hereinafter

"Official Notice"). The Applicants respectfully submit that the present claims are allowable over Chang, Lee and the Official Notice.

Claim 11 recites at least:

*"determining that a pre-registered remote direct memory access (RDMA) buffer that has been pre-registered for a given connection is too small to transfer data;
provisioning an RDMA buffer having a buffer size larger than a buffer size of the pre-registered RDMA buffer; and
transferring the data to a network using the provisioned RDMA buffer"*.

Chang and Lee do not disclose these limitations, or render them obvious. The discussion above is pertinent to this point.

As understood by Applicants, the Official Notice does not remedy **all** of what is missing from these references. Moreover, the Examiner does not appear to have relied upon the Official Notice as disclosing all of these limitations.

Accordingly, Applicants respectfully submit that independent claim 11, and its dependent claims, are believed to be allowable over Chang, Lee and the Official Notice.

35 U.S.C. §103(a) Rejection – Chang, Lee and Kato

Claims 12 and 20 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Chang in view of Lee and Official Notice and in further view of Kato. Without admitting that these references could or should be combined, the Applicants respectfully submit that the present claims are allowable over Chang, Lee, Official Notice and Kato.

Claims 12 and 20 depend from, and include all of the limitations of, independent claims 11 and 15, respectively. For the reasons discussed above, as understood by Applicants, Chang, Lee, Official Notice and Kato do not disclose all of the limitations of independent claims 11 and 15. Moreover, the Examiner does not appear to have relied upon these references as disclosing all of

these limitations, or articulated where all of these missing limitations are found in these references. Accordingly, Applicants respectfully submit that independent independent claims 11 and 15, and their dependent claims (including claims 12 and 20) are believed to be allowable.

Conclusion

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the cited art of record and are in condition for allowance. Applicants respectfully request that the rejections be withdrawn and the claims be allowed at the earliest possible date.

Request For Telephone Interview

The Examiner is invited to call Brent E. Vecchia at (303) 740-1980 if there remains any issue with allowance of the case.

Request For An Extension Of Time

The Applicants respectfully petition for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17 for such an extension.

Charge Our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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